

**What is claimed is:**

- 1 1. A method for generating user interfaces, comprising:
  - 2 (a) making a request from a client computer;
  - 3 (b) receiving the request at a server end and according to the request  
4 transferring a frame and a configuration file from the server end to the client  
5 computer, the configuration file comprising a plurality of filenames, a  
6 plurality of file addresses and a plurality of file coordinates, wherein each of  
7 the filenames corresponds to one file address and one file coordinate, each  
8 of the file addresses corresponds to a storage apparatus where the file  
9 corresponding to the filename is located and the file coordinate is used to  
10 designate the location of the file on the frame; and
  - 11 (c) receiving the frame and the configuration file from the client computer;  
12 and
  - 13 (d) linking to the storage apparatus corresponding to the file addresses and  
14 downloading the files corresponding to the filenames according to the file  
15 addresses corresponding to the filenames in the configuration file from the  
16 client computer; and
  - 17 (e) generating a user interface on the frame by displaying the files  
18 downloaded from the client computer based on the file coordinates  
19 corresponding to the filenames in the configuration file.
- 1 2. The method of claim 1, wherein the user interface comprises a content part  
2 and a layout part, and the filenames comprises a plurality of content  
3 filenames and a plurality of layout filenames, content files corresponding to  
4 the content filenames are used for generating the content part of the user  
5 interface, and layout files corresponding to the layout filenames are used for  
6 generating the layout part of the user interface.

- 1    3. The method of claim 1 further comprising:
  - 2        (f) deleting the gap between the frame and the user interface and
  - 3        displaying the overlapping display region of the user interface and the
  - 4        frame from the client computer when the display region of the frame is
  - 5        larger than the display region of the user interface.
- 1    4. The method of claim 1, wherein the configuration file further comprises a  
2        plurality of margin coordinates for locating the display region of the frame,  
3        the method further comprising:
  - 4        (f) forming a margin on the frame from the client computer based on the
  - 5        margin coordinates and deleting the display region of the frame beyond the
  - 6        margin.
- 1    5. The method of claim 1, wherein the configuration file further comprises a  
2        timer for initializing the client computer at preset times to execute the  
3        method for updating the user interface, the method comprising steps (d) to  
4        (e).
- 1    6. The method of claim 1, wherein the configuration file further comprises a  
2        timer for initializing the client computer at preset times to execute the  
3        method for updating the user interface, the method comprising the following  
4        steps:
  - 5        linking to the storage apparatus corresponding to the file addresses based
  - 6        on the file addresses corresponding to the filenames in the configuration file
  - 7        from the client computer:
  - 8        determining whether the files corresponding to the filenames in the storage
  - 9        apparatus being updated, if yes, the client computer downloading the
  - 10        updated files corresponding to the filenames, if not, the client computer not
  - 11        downloading the files corresponding to the filenames; and
  - 12        displaying the downloaded files on the frame to update the user interface

- 13 based on the file coordinates corresponding to the filenames in the  
14 configuration file from the client computer.
- 1 7. The method of claim 1, wherein the configuration file further comprises a  
2 timer for initializing the client computer at preset times to execute the  
3 method for updating the user interface, the method comprising steps (a) to  
4 (e).
- 1 8. The method of claim 1, wherein the storage apparatus is an external server.
- 1 9. The method of claim 1, wherein the server comprises the storage apparatus.
- 1 10. The method of claim 2, wherein the configuration file further comprises a first  
2 timer corresponding to the content filenames for initializing the client  
3 computer at preset times to execute the method for updating the user  
4 interface, the method comprising following steps:  
5 linking to the storage apparatus corresponding to the file addresses and  
6 downloading the content files corresponding to the content filenames  
7 according to the file addresses corresponding to the content filenames in the  
8 configuration file from the client computer; and  
9 displaying the downloaded content files to update the user interface on the  
10 frame based on the content file coordinates corresponding to the content  
11 filenames in the configuration file from the client computer.
- 1 11. The method of claim 2, wherein the configuration file further comprises a first  
2 timer corresponding to the content filenames for initializing the client  
3 computer at preset times to execute the method for updating the user  
4 interface, the method comprising following steps:  
5 linking to the storage apparatus corresponding to the file addresses  
6 according to the file addresses corresponding to the content filenames in the  
7 configuration file from the client computer;  
8 determining whether the content files corresponding to the content filenames

in the storage apparatus being updated, if yes, the client computer downloading the updated content files corresponding to the content filenames, if not, the client computer not downloading the content files corresponding to the content filenames; and

displaying the downloaded content files on the frame to update the user interface based on the content file coordinates corresponding to the content filenames in the configuration file from the client computer.

12. The method of claim 2, wherein the configuration file further comprises a first timer for initializing the client computer at preset times to execute the method for updating the user interface, the method comprising following steps:

making a request from the client computer;

receiving the request at the server end and according to the request transferring a frame and a content configuration file from the server end to the client computer, the content configuration file comprising a plurality of content filenames, a plurality of content file addresses and a plurality of content file coordinates, wherein each of the content filenames corresponds to one of the content file addresses and one of the content file coordinates, each of the content file addresses corresponds to one storage apparatus where the content file corresponding to the content filename is located, and the content file coordinates are used to designate the locations of the content files on the frame;

receiving the frame and the content configuration file from the client computer;

linking to the storage apparatus corresponding to the content file addresses and downloading the content files corresponding to the content filenames according to the content file addresses corresponding to the content filenames in the content configuration file from the client computer; and

22 displaying the downloaded content files on the frame to update the content  
 23 of the user interface from the client computer based on the content file  
 24 coordinates corresponding to the content filenames in the content  
 25 configuration file.

1 13. The method of claim 2, wherein the configuration file further comprises a  
 2 second timer corresponding to the layout filenames for initializing the client  
 3 computer at preset times to execute the method for updating the user  
 4 interface, the method comprising the following steps:  
 5 linking to the storage apparatus corresponding to the file addresses and  
 6 downloading the layout files corresponding to the layout filenames according  
 7 to the file addresses corresponding to the layout filenames in the  
 8 configuration file from the client computer; and  
 9 displaying the downloaded layout file on the frame to update the user  
 10 interface based on the layout file coordinates corresponding to the layout  
 11 filenames in the configuration file from the client computer.

1 14. The method of claim 2, wherein the configuration file further comprises a  
 2 second timer corresponding to the layout filenames for initializing the client  
 3 computer at preset times to execute the method for updating the user  
 4 interface, the method comprising following steps:  
 5 linking to the storage apparatus corresponding to the file addresses based  
 6 on the file addresses corresponding to the layout filenames in the  
 7 configuration file from the client computer;  
 8 determining whether the layout files corresponding to the layout filenames in  
 9 the storage apparatus being updated, if yes, the client computer  
 10 downloading the updated layout files corresponding to the layout filenames,  
 11 if not, the client computer not downloading the layout files corresponding to  
 12 the layout filenames; and  
 13 displaying the downloaded layout files on the frame to update the user

14 interface based on the file coordinates corresponding to the layout filenames  
15 in the configuration file from the client computer.

1 15. The method of claim 2, wherein the configuration file further comprises a  
2 second timer for initializing the client computer at preset times to execute the  
3 method for updating the user interface, the method comprising following  
4 steps:

5 making a request from the client computer;

6 receiving the request at the server end and according to the request  
7 transferring a frame and a layout configuration file from the server end to  
8 the client computer, the layout configuration file comprising a plurality of  
9 layout filenames, a plurality of layout file addresses and a plurality of layout  
10 file coordinates, wherein each of the layout filenames corresponds to one  
11 of the layout file addresses and one of the layout file coordinates, each of  
12 the layout file addresses corresponds to the storage apparatus where the  
13 layout file corresponding to the layout filename is located, and the layout  
14 file coordinates are used to designate the locations of the layout files on the  
15 frame;

16 receiving the frame and the layout configuration file from the client  
17 computer;

18 linking to the storage apparatus corresponding to the layout file addresses  
19 and downloading the layout files corresponding to the layout filenames  
20 according to the layout file addresses in the layout configuration file from  
21 the client computer; and

22 displaying the downloaded layout files on the frame to update the layout of  
23 the user interface based on the layout file coordinates corresponding to the  
24 layout filenames in the layout configuration file from the client computer.

1 16. The method of claim 1, wherein the configuration file further comprises a  
2 plurality of timers, each of the timers corresponding to one of the filenames

for initializing the client computer at preset times to execute the method for updating the user interface, the method comprising the following steps:

linking to the storage apparatus corresponding to the file address and downloading the file corresponding to the filename according to the file address corresponding to the timer in the configuration file from the client computer; and

displaying the downloaded file on the frame to update the user interface based on the file coordinate corresponding to the filename in the configuration file from the client computer.

17. The method of claim 1, wherein the configuration file further comprises a plurality of timers, each of the timers corresponding to one of the filenames for initializing the client computer at preset times to execute the method for updating the user interface, the method comprising the following steps:

linking to the storage apparatus corresponding to the file address and downloading the files corresponding to the filename according to the file address corresponding to the timer in the configuration file from the client computer;

determining whether the file corresponding to the filename in the storage apparatus being updated, if yes, the client computer downloading the file corresponding to the filename, if not, the client computer not downloading the file corresponding to the filename; and

displaying the downloaded file on the frame to update the user interface based on the file coordinate corresponding to the filename in the configuration file from the client computer.

18. The method of claim 1, wherein the configuration file further comprises a plurality of timers, each of the timers corresponding to one of the filename for initializing the client computer at preset times to execute the method for updating the user interface, the method comprising the following steps:

5 making a request from the client computer;

6 receiving the request at the server end and according to the request

7 transferring a component configuration file from the server end to the client

8 computer, the component configuration file comprising the filename, a file

9 address corresponding to the filename and a file coordinate corresponding

10 to the filename, the file address corresponding to a storage apparatus where

11 the file corresponding to the filename being located, and the file coordinate

12 being used to designate the location of the configuration file on the frame;

13 receiving the frame and the component configuration file from the client

14 computer;

15 linking to the storage apparatus corresponding to the file address and

16 downloading the file corresponding to the filename according to the file

17 address corresponding to the filename in the component configuration file

18 from the client computer; and

19 displaying the downloaded file on the frame to update the user interface

20 based on file coordinate in the component configuration file from the client

21 computer.

1 19. The method of claim 1, wherein the client computer further comprises a

2 driver module used to enable the client computer to execute the method to

3 update the user interface from the client computer, the method comprising

4 steps (a) to (e).

1 20. The method of claim 2, wherein the client computer further comprises a first

2 driver module used to enable the client computer to execute the method for

3 updating the user interface from the client computer, the method comprising

4 the following steps:

5 making a request from the client computer;

6 receiving the request at the server end and according to the request

7 transferring a frame and a content configuration file from the server end to



the client computer, the content configuration file comprising a plurality of content filenames, a plurality of content file addresses and a plurality of content file coordinates, wherein each of the content filenames corresponds to one of the content file addresses and one of the content file coordinates, each of the content file addresses corresponds to the storage apparatus where the content files corresponding to the content filenames are located, and the content file coordinates are used to designate the locations of the content files on the frame; and

receiving the frame and the content configuration file from the client computer; and

linking to the storage apparatus corresponding to the content file addresses and downloading the content files corresponding to the content filenames according to the content file addresses in the content configuration file from the client computer; and

displaying the downloaded content files on the frame to update the content of the user interface from the client computer based on the content file coordinates corresponding to the content filenames in the content configuration file.

21. The method of claim 2, wherein the client computer further comprises a second driver module used to enable the client computer to execute the method for updating the user interface from the client computer, the method comprising following steps:

making a request from the client computer;

receiving the request at the server end and according to the request transferring a frame and a layout configuration file from the server end to the client computer, the layout configuration file comprising a plurality of layout filenames, a plurality of layout file addresses and a plurality of layout file coordinates, wherein each of the layout filenames corresponds to one of the layout file addresses and one of the layout file coordinates, each of

the layout file addresses corresponds to the storage apparatus where the layout files corresponding to the layout filenames are located, and the layout file coordinates are used to designate the locations of the layout files on the frame; and

receiving the frame and the layout configuration file from the client computer; and

linking to the storage apparatus corresponding to the layout file addresses and downloading the layout files corresponding to the layout filenames according to the layout file addresses in the layout configuration file from the client computer; and

displaying the downloaded layout files on the frame to update the layout of the user interface from the client computer based on the layout file coordinates corresponding to the layout filenames in the layout configuration file.

22. The method of claim 1, wherein the client computer further comprises a plurality of driver modules, each of the driver modules corresponds to one of the filenames used to enable the client computer to execute the method for updating the user interface, the method comprising the following steps:

making a request from a client computer;

receiving the request at a server end and according to the request transferring a component configuration file from the server end to the client computer, the component configuration file comprising the filename, a file address corresponding to the filename and a file coordinate corresponding to the filename, the file address corresponds to a storage apparatus where the file corresponding to the filename is located, and the file coordinate is used to designate the location of the file on the frame;

linking to the storage apparatus corresponding to the file address and downloading the file according to the file address corresponding to the

15 filename in the component configuration file from the client computer; and  
 16 displaying the downloaded file on the frame based on the file coordinate in  
 17 the component configuration file to update the user interface from the client  
 18 computer.

1 23. A system for generating user interfaces, comprising:

2 a server, comprising:

3 a frame module used to generate a frame; and

4 a plurality of configuration files, each of the configuration files having a  
 5 plurality of filenames, a plurality of file addresses and a plurality of file  
 6 coordinates, wherein each of the filenames corresponds to one of the file  
 7 addresses and one of the file coordinates, each of the file addresses  
 8 corresponds to a storage apparatus where the file corresponding to the  
 9 filename is located, and the file coordinates are used to designate the  
 10 locations of the files on the frame;

11 a client computer, comprising:

12 a communication module for receiving the frame and the configuration files  
 13 from the server;

14 a download module for linking to the storage apparatus corresponding to  
 15 the file addresses and downloading the files corresponding to the filenames  
 16 according to the file addresses in the configuration file; and

17 a combination module for displaying the downloaded files on the frame to  
 18 update the user interface based on the file coordinates corresponding to  
 19 the filenames in the configuration file.

1 24. The system of claim 23, wherein the user interface comprises a content part  
 2 and a layout part, and the filenames comprises a plurality of content  
 3 filenames and a plurality of layout filenames, content files corresponding to

4 the content filenames are used for generating the content part of the user  
5 interface, and layout files corresponding to the layout filenames are used for  
6 generating the layout part of the user interface.

1 25. The system of claim 23, wherein the client computer further comprises:

2 a re-shaping module for deleting the display region of the frame which is  
3 beyond the overlapping display region of the user interface and the frame.

1 26. The system of claim 23, wherein the configuration file further comprises a  
2 plurality of margin coordinates for designating the display region of the frame,  
3 the client computer further comprises:

4 a re-shaping module for forming a margin on the frame based on the margin  
5 coordinates and deleting the display region of the frame beyond the margin.

1 27. The system of claim 23, wherein the configuration file further comprises a  
2 timer used to initialize the download module and the combination module of  
3 the client computer at preset times.

1 28. The system of claim 27, wherein the server further comprises a determining  
2 module, when the download module of the client computer is initialized to  
3 link to the storage apparatus according to the file address corresponding to  
4 the filename in the configuration file, the determining module determines  
5 whether the file corresponding to the filename in the storage apparatus is  
6 updated, if yes, the client computer downloads the file corresponding to the  
7 filename, if not, the client computer does not download the file  
8 corresponding to the filename.

1 29. The system of claim 23, wherein the configuration file further comprises a  
2 timer used to initialize the communication module, the download module and  
3 the combination module of the client computer at preset times.

1 30. The system of claim 23, the storage apparatus is an external server.

1 31. The system of claim 23, wherein the server further comprises the storage

2 apparatus.

1 32. The system of claim 24, wherein the configuration file further comprises a  
2 first timer corresponding to the content filenames used for:

3 initializing the download module of the the client computer to link to the  
4 storage apparatus corresponding to the file addresses and download the  
5 content files corresponding to the content filenames according to the file  
6 addresses in the configuration file; and

7 initializing the combination module of the client computer to display the  
8 downloaded content files on the frame to update the content part of the user  
9 interface based on the content file coordinates corresponding to the content  
10 filenamese in the content configuration file.

1 33. The system of claim 32, wherein the server further comprises a determining  
2 module, when the download module of the client computer is initialized to  
3 link to the storage apparatus according to the content file address  
4 corresponding to the content filename in the configuration file, the  
5 determining module determines whether the content file corresponding to  
6 the content filename in the storage apparatus is updated, if yes, the client  
7 computer downloads the content file corresponding to the content filename,  
8 if not, the client computer does not download the content file corresponding  
9 to the content filename.

1 34. The system of claim 24, wherein the configuration file further comprises a  
2 first timer for:

3 initializing the communication module of the client computer at preset times  
4 to receive a content configuration file from the server, the content  
5 configuration file comprising a plurality of content filenames, a plurality of  
6 content file addresses and a plurality of content file coordinates, wherein  
7 each content filename corresponds to one of the content file addresses and  
8 one of the content file coordinates, each content file address corresponds to  
9 the storage apparatus where the content file corresponding to the content

10 filename is located, and the content file coordinates are used to designate  
 11 the locations of the content files on the frame;  
 12 initializing the download module of the client computer to link to the storage  
 13 apparatus corresponding to the file addresses and download the content  
 14 files corresponding to the content filenames according to the file addresses  
 15 in the configuration file; and  
 16 initializing the combination module of the client computer to display the  
 17 downloaded content files on the frame to update the content part of the user  
 18 interface based on the content file coordinates corresponding to the content  
 19 filenames in the content configuration file.

1 35. The system of claim 24, wherein the configuration file further comprises a  
 2 second timer corresponding to the layout filenames used for:  
 3 initializing the download module of the client computer to link to the storage  
 4 apparatus corresponding to the file addresses and download the layout files  
 5 corresponding to the layout filenames according to the file addresses in the  
 6 configuration file; and  
 7 initializing the combination module of the client computer to display the  
 8 downloaded layout files on the frame to update the layout part of the user  
 9 interface based on the file coordinates corresponding to the layout filenames  
 10 in the layout configuration file.

1 36. The system of claim 35, wherein the server further comprises a determining  
 2 module to determine whether the file which corresponds to the layout  
 3 filename in the storage apparatus is updated, thereupon the client computer  
 4 is initialized by the download module and links to the storage apparatus  
 5 corresponding to the file address according to the file address corresponding  
 6 to the layout filename in the component configuration file; if yes, the client  
 7 computer downloads the layout file which corresponds to the layout filename,  
 8 if not, the client computer does not download the layout file which  
 9 corresponds to the layout filename.

37. The system of claim 24, wherein the configuration file further comprises a second timer for:

initializing the communication module at preset times to receive a layout configuration file from the server from the client computer; the layout configuration file comprising a plurality of layout filenames, a plurality of layout file addresses and a plurality of layout file coordinates, wherein each layout filename corresponds to the layout file address and the layout file coordinates, each layout file address corresponds to the storage apparatus where the layout files corresponding to the layout filenames are located and layout file coordinates are used to locate the layout configuration file on the frame;

initializing the download module to link to the storage apparatus corresponding to the file address and download the layout file corresponding to the layout filename according to the layout file address corresponding to each layout filename in the layout configuration file from the client computer; and

initializing the combination module to display the downloaded layout file by updating the layout part of the user interface based on layout file coordinates corresponding to the layout filename in the layout configuration file from the client computer.

38. The system of claim 23, wherein the configuration file further comprises a plurality of timers, each timer corresponding to a filename for:

initializing the download module to link to the storage apparatus corresponding to the file address and download the file corresponding to the filename according to the file address corresponding to the filename in the configuration file from the client computer; and

initializing the combination module to display the downloaded file on the frame based on file coordinates corresponding to the filename in the

9 configuration file from the client computer.

1 39. The system of claim 38, wherein the server further comprises a determining  
2 module, when the download module of the client computer is initialized to  
3 link to the storage apparatus according to the file address corresponding to  
4 the filename in the configuration file, the determining module determines  
5 whether the file corresponding to the filename in the storage apparatus is  
6 updated, if yes, the client computer downloads the file corresponding to the  
7 filename, if not, the client computer does not download the file  
8 corresponding to the filename.

1 40. The system of claim 23, wherein the configuration file further comprises a  
2 plurality of timers, each of the timers is corresponding to one of the  
3 filenames and is used for:

4 initializing the communication module of the client computer at preset times  
5 to receive a configuration file from the server, the configuration file  
6 comprising the filename, a file address corresponding to the filename and a  
7 file coordinate corresponding to the filename, the file address corresponds to  
8 a storage apparatus where the file corresponding to the filename is located,  
9 and the file coordinate is used to designate the location of the file on the  
10 frame;

11 initializing the download module of the client computer to link to the storage  
12 apparatus corresponding to the file address and download the file  
13 corresponding to the filename according to the file address in the  
14 configuration file; and

15 initializing the combination module of the client computer to display the  
16 downloaded file on the frame based on the file coordinate in the  
17 configuration file.

1 41. The system of claim 23, wherein the client computer comprises a driver  
2 module used to initialize the communication modules, the download module  
3 and the combination module at preset times from the client computer.



42. The system of claim 24, wherein the client computer further comprises a first driver module for:

initializing the communication module of the client computer to receive a content configuration file from the server, the content configuration file comprising a plurality of content filenames, a plurality of content file addresses and a plurality of content file coordinates, wherein each content filename corresponds to one of the content file addresses and one of the content file coordinates, each content file address corresponds to the storage apparatus where the content file corresponding to the content filename is located, and the content file coordinates are used to designate the locations of the content files on the frame;

initializing the download module of the client computer to link to the storage apparatus corresponding to the file addresses and download the content files corresponding to the content filenames according to the file addresses in the configuration file; and

initializing the combination module of the client computer to display the downloaded content files on the frame to update the content part of the user interface based on the content file coordinates corresponding to the content filenames in the content configuration file.

43. The system of claim 24, wherein the client computer further comprises a second driver module for:

initializing the communication module of the client computer to receive a layout configuration file from the server, the layout configuration file comprising a plurality of layout filenames, a plurality of layout file addresses and a plurality of layout file coordinates, wherein each layout filename corresponds to one of the layout file addresses and one of the layout file coordinates, each layout file address corresponds to the storage apparatus where the layout file corresponding to the layout filename is located, and the layout file coordinates are used to designate the locations of the layout files

11 on the frame;

12 initializing the download module of the client computer to link to the storage

13 apparatus corresponding to the file addresses and download the layout files

14 corresponding to the layout filenames according to the file addresses in the

15 configuration file; and

16 initializing the combination module of the client computer to display the

17 downloaded layout files to update the layout part of the user interface based

18 on the layout file coordinates corresponding to the layout filenames in the

19 layout configuration file.

1 44. The system of claim 23, wherein the client computer further comprises:

2 a plurality of driver modules, each of the driver modules is corresponding to

3 one of the filenames and is used for initializing the communication module of

4 the client computer so as to receive a component configuration file from the

5 server end, the component configuration file comprises the filename

6 corresponding to the driver module, a file address corresponding to the

7 filename and a file coordinate corresponding to the filename, the file address

8 corresponds to a storage apparatus where the file corresponding to the

9 filename is located, and the file coordinate is used to designate the location

10 of the file on the frame;

11 initializing the download module of the client computer and according to the

12 file address corresponding to the filename in the component configuration

13 file, the download module linking to the storage apparatus corresponding to

14 the file address and downloading the file corresponding to the filename; and

15 initializing the combination module of the client computer to display the

16 downloaded file on the frame according to the file coordinate in the

17 component configuration file.